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OM protein - protein search, using sw model

Run on: February 16, 2005, 16:08:55 ; Search time 42.0491 Seconds
(without alignments)
2014.322 Million cell updates/sec

Title: US-10-003-356-2
Perfect score: 1138
Sequence: 1 MFERRKQDEGGIHEFLAP.....RVIASDKIQKAVVKRIQHP 219

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Length	DB	ID	Description
1	1138	100.0	219	5	AAE24048	Aae24048 Human V2
2	1138	100.0	755	7	ADC85997	Adc85997 Human GPC
3	1138	100.0	927	5	AAE24050	Aae24050 Chimeric
4	740	65.0	912	8	ADI41024	Adi41024 Mouse phe
5	707	62.1	720	7	ADC12754	Adc12754 Human GPC
6	362	31.8	940	7	ADJ93195	Adj93195 Fugu extr
7	362	31.8	940	8	ADI40967	Adi40967 Fugu calc
8	362	31.8	940	8	ADI41016	Adi41016 Fugu calc
9	357	31.4	1059	4	AAU00508	Aau00508 Chicken c
10	354	31.1	850	7	ADH10927	Adh10927 Atlantic
11	354	31.1	941	7	ADH10923	Adh10923 Atlantic
12	354	31.1	941	7	ADH10925	Adh10925 Atlantic
13	354	31.1	941	7	ADH10929	Adh10929 Atlantic
14	353	31.0	612	2	AAY49105	Aay49105 Human CaR
15	353	31.0	612	5	AAO15072	Aao15072 Human CaR
16	353	31.0	901	3	AAY45001	Aay45001 Human cal
17	353	31.0	917	2	AAY49126	Aay49126 Chimeric
18	353	31.0	917	5	AAO15092	Aao15092 Chimeric
19	353	31.0	974	3	AAY45000	Aay45000 Human cal
20	353	31.0	975	4	AAB47218	Aab47218 Chimeric
21	353	31.0	1001	3	AAY44999	Aay44999 Human cal
22	353	31.0	1026	2	AAW32059	Aaw32059 Dogfish s
23	353	31.0	1027	5	AAU76004	Aau76004 Shark kid
24	353	31.0	1027	5	ABB78761	Abb78761 Dogfish s
25	353	31.0	1027	7	ADH10917	Adh10917 Shark pol

26	353	31.0	1027	7	ABW02706	Abw02706 Dogfish s
27	353	31.0	1027	8	ADI19970	Adi19970 Dogfish s
28	353	31.0	1078	2	AAW11889	Aaw11889 Parathyro
29	353	31.0	1078	2	AAW54846	Aaw54846 Human par
30	353	31.0	1078	2	AAW38274	Aaw38274 Human par
31	353	31.0	1078	2	AAY28840	Aay28840 Human cal
32	353	31.0	1078	2	AAY41780	Aay41780 Human par
33	353	31.0	1078	2	AAW89565	Aaw89565 Human par
34	353	31.0	1078	3	AAW51827	Aay51827 Human cal
35	353	31.0	1078	3	AAW70325	Aay70325 Human wil
36	353	31.0	1078	4	AAU02195	Aau02195 Cynomolgo
37	353	31.0	1078	4	AAW74391	Aab74391 Protein e
38	353	31.0	1078	5	AAW47822	Aab47822 HuCaR4.0.
39	353	31.0	1078	6	ABP81817	Abp81817 Human cal
40	353	31.0	1078	6	ABG72193	Abg72193 Human cal
41	353	31.0	1078	7	ADD48571	Add48571 Human Pro
42	353	31.0	1078	7	ADE62143	Ade62143 Human Pro
43	353	31.0	1078	7	ADE62147	Ade62147 Human Pro
44	353	31.0	1078	7	ADH10955	Adh10955 Human par
45	353	31.0	1078	7	ADJ68365	Adj68365 Human hea

ALIGNMENTS

RESULT 1
AAE24048
ID AAE24048 standard; protein; 219 AA.
XX

AC AAE24048;

DT 04-OCT-2002 (first entry)

XX Human V2 vomeronasal receptor (Zvn2R1) N-terminal protein.

DE Human; V2 vomeronasal receptor; Zvn2R1; educational tool; gene therapy; receptor.
KW Homo sapiens.

OS Homo sapiens.

XX Key Location/Qualifiers

FT Peptide 1..29

FT Protein /label= Signal_peptide

FT /note= "Mature human Zvn2R1 N-terminal protein"

XX WO200242464-A2.

PD 30-MAY-2002.

XX 15-NOV-2001; 2001WO-US046034.

PR 21-NOV-2000; 2000US-0252373P.

XX (ZYMO) ZYMOGENETICS INC.

PI Lok S, Holloway JL;

XX WPI; 2002-479953/51.

DR N-PSDB; AAD39168.

XX Novel isolated human V2 vomeronasal receptor, termed Zvn2R1, for

PT identifying presence of Zvn2R1 ligand in sample, as educational tools in

PT laboratory practicum kits for courses related to genetics and molecular

PT biology.

PS Claim 1; Page 81; 98pp; English.

XX The invention relates to an isolated human V2 vomeronasal receptor termed

CC Zvn2R1. The Zvn2R1 nucleic acid is useful for detecting the expression of

CC Zvn2R1 gene in a biological sample, to determine if a subject's

CC chromosomes contain a mutation in the Zvn2R1 gene, and for therapeutic

CC purposes. Zvn2R1 is useful as an aid to teach preparation of antibodies,

CC identifying proteins by Western blotting, protein purification,
CC determining the weight of expressed Zvn2R1 polypeptides as a ratio to
CC total protein expressed, identifying peptide cleavage sites, coupling
CC amino and carboxyl terminal tags, amino acid sequence analysis,
CC monitoring biological activities of both the native and tagged protein in
CC vitro and in vivo and to teach analytical skills such as mass
CC spectrometry, circular dichroism to determine conformation, especially of
CC the four alpha helices X-ray crystallography to determine the three-
CC dimensional structure in atomic detail, and nuclear magnetic resonance
CC spectroscopy to reveal the structure of proteins in solution. Zvn2R1 is
CC useful as educational tools in laboratory practicum kits for courses
CC related to genetics and molecular biology, protein chemistry, antibody
CC production and analysis, and as standards or as unknowns for testing
CC purposes. The invention is useful as a teaching aid to instruct students
CC how to prepare affinity chromatography columns to purify Zvn2R1, and for
CC cloning and sequencing the polynucleotide that encodes an antibody and
CC thus as a practicum for teaching a student how to design humanised
CC antibodies. The invention is useful in gene therapy. The present sequence
CC is human Zvn2R1 N-terminal protein
XX
SQ Sequence 219 AA;

Query Match 100.0%; Score 1138; DB 5; Length 219;
Best Local Similarity 100.0%; Pred. No. 3.5e-123;
Matches 219; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MFERRKEQDEGPGIHEFLAFLWAEILGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60
Db 1 MFERRKEQDEGPGIHEFLAFLWAEILGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60
QY 61 IDSRTIPANESILEPASAKCEGFNFQFRWWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120
Db 61 IDSRTIPANESILEPASAKCEGFNFQFRWWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120
QY 121 CFTISKSVEAVLVFLTGQENRPNFRNSTGAPPAGIVGAGGSFLVSPASRILGLYLPQV 180
Db 121 CFTISKSVEAVLVFLTGQENRPNFRNSTGAPPAGIVGAGGSFLVSPASRILGLYLPQV 180
QY 181 GYTSTCVILSDKYQFPSPYLRLVIASDKIQSKAVVKRIQHF 219
Db 181 GYTSTCVILSDKYQFPSPYLRLVIASDKIQSKAVVKRIQHF 219

RESULT 2
ADC85997
ID ADC85997 standard; protein; 755 AA.
XX
AC ADC85997;
XX
DT 01-JAN-2004 (first entry)
XX
DE Human GPCR protein SEQ ID NO:450.
XX
KW human; GPCR; guanosine triphosphate-binding protein coupled receptor;
KW gene therapy.
XX Homo sapiens.
XX EP1270724-A2.
XX
PD 02-JAN-2003.
XX
PF 18-JUN-2002; 2002EP-00013517.
XX
PR 18-JUN-2001; 2001JP-00246789.
XX
PA (NAAD-) NAT INST ADVANCED IND SCI & TECHNOLOGY.
PA (ADSC-) CENT ADVANCED SCI & TECHNOLOGY INCUBATIO.
XX
PI Suwa M, Asai K, Akiyama Y, Aburatani H;
XX
DR WPI; 2003-315783/31.
DR N-PSDB; ADC85996.

XX New polynucleotide, useful for preparing a composition for treating a
PT patient in need of increased or suppressed activity or expression of the
PT guanosine triphosphate-binding protein coupled receptor.
XX
PS Claim 2; SEQ ID NO 450; 28pp; English.
XX
CC The invention relates to a novel polynucleotide encoding a guanosine
CC triphosphate-binding protein coupled receptor (GPCR). A polynucleotide of
CC the invention may have a use in gene therapy. The polynucleotide and
CC polypeptide are useful for preparing a composition for treating a patient
CC in need of increased or suppressed activity or expression of the
CC guanosine triphosphate-binding protein coupled receptor. The protein
CC sequences shown in ADC85549-ADC87617 represent GPCR's of the invention.
XX
SQ Sequence 755 AA;

Query Match 100.0%; Score 1138; DB 7; Length 755;
Best Local Similarity 100.0%; Pred. No. 2.2e-122;
Matches 219; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 MFERRKEQDEGPGIHEFLAFLWAEILGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60
Db 1 MFERRKEQDEGPGIHEFLAFLWAEILGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60
QY 61 IDSRTIPANESILEPASAKCEGFNFQFRWWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120
Db 61 IDSRTIPANESILEPASAKCEGFNFQFRWWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120
QY 121 CFTISKSVEAVLVFLTGQENRPNFRNSTGAPPAGIVGAGGSFLVSPASRILGLYLPQV 180
Db 121 CFTISKSVEAVLVFLTGQENRPNFRNSTGAPPAGIVGAGGSFLVSPASRILGLYLPQV 180
QY 181 GYTSTCVILSDKYQFPSPYLRLVIASDKIQSKAVVKRIQHF 219
Db 181 GYTSTCVILSDKYQFPSPYLRLVIASDKIQSKAVVKRIQHF 219

RESULT 3
AAE24050
ID AAE24050 standard; protein; 927 AA.
XX
AC AAE24050;
XX
DT 29-AUG-2003 (revised)
DT 04-OCT-2002 (first entry)
XX
DE Chimeric receptor DNA protein.
XX
KW Human; V2 vomeronasal receptor; Zvn2R1; educational tool; gene therapy;
KW receptor; murine; chimeric.
XX
OS Homo sapiens.
OS Mus sp.
OS Chimeric.
XX
FH Key
FH Domain
FT /note= "Extracellular domain"
FT Peptide
FT /label= Signal_peptide
FT Protein
FT /note= "Mature chimeric receptor protein"
FT Domain
FT /note= "Ligand binding domain"
FT Domain
FT /note= "Transmembrane domain-1"
FT Domain
FT /note= "Intracellular domain"
FT Domain
FT /note= "Transmembrane domain-2"
FT Domain
FT /note= "Extracellular domain"

proteins minus the start methionine (and the region of the polynucleotide encoding this protein region). The proteins are designated HGPRBMY30-1, HGPRBMY30-2, HGPRBMY30-3, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY41-3, HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are expression vectors, host cells, antibodies, preventing (treating or ameliorating) a medical condition comprising administering to a mammalian subject the polypeptide or its modulator and diagnosing a pathological condition or a susceptibility to a pathological condition in a subject (comprising determining the presence or absence of a mutation in the polynucleotide, or the presence or amount of expression of the polypeptide in a biological sample and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of the mutation, or the presence or amount of expression of the polypeptide). The human G-protein coupled receptor polypeptide or polynucleotide can be used for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, and for preventing, treating or ameliorating a medical condition, such as a disorder related to aberrant G-protein coupled receptor activity, a disorder related to aberrant signal transduction, a reproductive disorder, a male reproductive disorder, a testicular disorder, a vas deferens disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male, epididymitis, genital warts, germinal cell aplasia, cryptorchidism, varicocele, immotile cilia syndrome, viral orchitis, sperm transport disorders, testicular cancer, choriocarcinoma, non-seminoma, seminoma, testicular germ cell tumours, male hormone disorders, premature puberty, incomplete puberty, Kallman syndrome, Cushing's syndrome, an immune disorder, a proliferative immune disorder, leukaemia, arthritis, asthma, immunodeficiency diseases such as AIDS, rheumatoid arthritis, granulomatous disease, inflammatory bowel disease, sepsis, acne, neutropenia, neutrophilia, psoriasis, hypersensitivities, such as T-cell mediated cytotoxicity, immune reactions to transplanted organs and tissues, such as host-versus-graft and graft-versus-host diseases, or autoimmunity disorders, such as autoimmune infertility, demyelination, systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's disease, scleroderma, T-cell maturation disorders, B-cell maturation disorders, vascular disorders, stroke, ischaemia, myocardial infarction, atherosclerosis, embolisms, thrombosis, gastrointestinal disorders, irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders, endocrine disorders, or ovarian, stomach, colon or kidney cancer or its related proliferative condition (many other diseases and disorders are listed in the specification). The antibodies may be used to purify, detect and target the G-protein coupled receptor polypeptides. The polynucleotides are also useful in gene therapy. The present sequence represents a species homologue of a novel GPCR of the invention.

Sequence 912 AA;

Query Match	65.0%;	Score 740;	DB 8;	Length 912;
Best Local Similarity	69.7%;	Pred. No. 4.9e-76;		
Matches 145;	Conservative 25;	Mismatches 30;	Indels 8;	Gaps 2;
QY	17	FLAFLWALGSEAKKEBEERTCLLGK-----CVD AENHSLVIGGLFPIDSRTPANES	71	
Db	12	FLAFLWAVLGA---QNKTEEVQCRLMAKFNLSGYVDKAKNLSVLAGLFPVDEA	68	
QY	72	ILEPASAKCEGFNFQFRWVKAMIMHMIKEINKRKDILPNITLGYQIFDTCFTISKSVBAV	131	
Db	69	ILEVSPMCEGFNFRGFRWVKMTMIHTIKENRDKILPNHTLGYQIFDSCYTISKAMESS	128	
QY	132	LVFLTGOEENRPNRNSTGAFPAIVGAGGGSFLSPASRILGLYLPQVGYTSTCTVILSD	191	
Db	129	LVFLTGOEEFKPNRNSTGSTLAALVSGSGSSLSVAASRILGLYMPQVGYTSSCSILSD	188	
QY	192	KYQFPYSYLRVIASDKIQSKAVVKRIQHF	219	
Db	189	KYQFPYSYLRVLPDNLQSEAINVLIKHF	216	

RESULT 5
ADC12754
ID ADC12754 standard; protein; 720 AA.

XX AC ADC12754;

XX DT 18-DEC-2003 (first entry)
XX DE Human GPCR protein, SEQ ID No 86.
XX KW G protein-coupled receptor; GPCR; antibacterial; fungicide; protozoacide; virucide; antirheumatic; antiarthritic; tranquiliser; antidiabetic; osteopathic; nootropic; neuroprotective; anorectic; cardiant; neuroleptic; cytostatic; antiparkinsonian; hypotensive; hypertensive; antitumor; antiallergic; anticonvulsant; analgesic; infection; rheumatoid arthritis; chronic obstructive pulmonary diseases; COPD; asthma; non-insulin dependent diabetes; obesity; osteoporosis; Alzheimer's disease; age-related macular degeneration; myocardial infarction; schizophrenia; osteoarthritis; cancer; Parkinson's disease; congestive heart failure; hypotension; hypertension; ulcer; allergy; benign prostatic hyperplasia; seizure disorder; anxiety; obsessive compulsive disorder; Cushing's syndrome; hypopituitarism; pain; human.
XX OS Homo sapiens.
XX PN WO2003000893-A2.
XX PD 03-JAN-2003.
XX PF 24-JUN-2002; 2002WO-IB002357.
XX PR 26-JUN-2001; 2001US-0301095P.
XX PR 06-NOV-2001; 2001US-0333185P.
XX PA (DECO-) DECODE GENETICS EHF.
XX PI Martinez RNA, Sigurdsson GT;
XX WPI; 2003-210155/20.
XX DR N-PSDB; ADC12753.
XX PT New G protein-coupled receptor (GPCR) genes and polypeptides, useful for diagnosing diseases associated with a GPCR, or in gene therapy for treating e.g. obesity, osteoporosis, Alzheimer's, cancers or congestive heart failure.
XX PS Claim 10; SEQ ID NO 86; 253pp; English.
XX CC The invention relates to a novel isolated nucleic acid of a G protein-coupled receptor (GPCR) gene comprising any of 62 sequences of 912-2454 bp, or its complements; a GPCR polypeptide comprising any of 62 sequences of 291-818 amino acids; or a nucleic acid that hybridises, under high stringency conditions, with any of the 62 GPCR sequences or any of their complements. The GPCR agents of the invention have the following activities: antibacterial, fungicide, protozoacide, virucide, antirheumatic, tranquiliser, antiarthritic, antidiabetic, osteopathic, nootropic, neuroprotective, anorectic, cardiant, neuroleptic, cytostatic, antiparkinsonian, hypotensive, hypertensive, antitumor, antiallergic, anticonvulsant, and analgesic. The GPCR therapeutic agent, particularly a GPCR gene agonist or antagonist, is useful for treating a disease or condition associated with a GPCR in an individual. The nucleic acid cited above, which is 100 or fewer nucleotides in length, is useful for assaying a sample for the presence of the GPCR gene nucleic acid or a GPCR gene nucleic acid with at least one nucleotide difference from a first nucleic acid, or for diagnosing a susceptibility to a disease or conditions associated with a GPCR. These diseases include infections (e.g. bacterial, fungal, protozoan or viral), rheumatoid arthritis, chronic obstructive pulmonary diseases (COPD), asthma, non-insulin dependent diabetes, obesity, osteoporosis, Alzheimer's disease, age-related macular degeneration, myocardial infarction, schizophrenia, osteoarthritis, cancers, Parkinson's diseases, congestive heart failure, hypotension, hypertension, ulcers, allergies, benign prostatic hyperplasia, seizure disorder, anxiety, obsessive compulsive disorder, Cushing's syndrome, hypopituitarism, or pain. This sequence represents one of the 62 GPCR proteins of the invention.

Sequence 720 AA;

CC polypeptide or polynucleotide can be used for diagnosing a pathological
CC condition or a susceptibility to a pathological condition in a subject,
CC and for preventing, treating or ameliorating a medical condition, such as
CC a disorder related to aberrant G-protein coupled receptor activity, a
CC disorder related to aberrant signal transduction, a reproductive disorder
CC ; a male reproductive disorder, a testicular disorder, a vas deferens
CC disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male,
CC epididymitis, genital warts, germinal cell aplasia, cryptorchidism,
CC varicocele, motile cilia syndrome, viral orchitis, sperm transport
CC disorders, testicular cancer, choriocarcinoma, non-seminoma, seminoma,
CC testicular germ cell tumours, male hormone disorders, premature puberty,
CC incomplete puberty, Kallman syndrome, Cushing's syndrome, an immune
CC disorder, a proliferative immune disorder, leukaemia, arthritis, asthma,
CC immunodeficiency diseases such as AIDS, rheumatoid arthritis,
CC granulomatous disease, inflammatory bowel disease, sepsis, acne,
CC neutropenia, neutrophilia, psoriasis, hypersensitivities, such as T-cell
CC mediated cytotoxicity, immune reactions to transplanted organs and
CC tissues, such as host-versus-graft and graft-versus-host diseases, or
CC autoimmunity disorders, such as autoimmune infertility, demyelination,
CC systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's
CC disease, scleroderma, T-cell maturation disorders, B-cell maturation
CC disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
CC atherosclerosis, embolisms, thrombosis, gastrointestinal disorders,
CC irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
CC endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
CC related proliferative condition (many other diseases and disorders are
CC listed in the specification). The antibodies may be used to purify,
CC detect and target the G-protein coupled receptor polypeptides. The
CC polynucleotides are also useful in gene therapy. The present sequence
CC represents a species homologue of a novel GPCR of the invention.
XX
SQ Sequence 940 AA;

Query Match 31.8%; Score 362; DB 8; Length 940;
Best Local Similarity 42.8%; Pred. No. 4.2e-32;
Matches 74; Conservative 37; Mismatches 56; Indels 6; Gaps 3;
QY 53 LVIGGLFPIDSRTPANESI-LEPASAKCEGFNFQFRWMKAMIHMKIKRDKDILPNI 111
Db 33 ILGLGFPIHFGISSKDNLAARPESTKCVRFNFRGFRWLQAMVFAIEBINSSLLPNI 92
QY 112 TLGYQIFDTCFTISKSVEAVLVLTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
Db 93 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSILNDEFNCCTDHIPATIAVVGAGSAVST 152
QY 167 PASRIILGLYLPQVGYTSTCVILSDKYQFPSYLRVIAADKIQSKAVVKRIQHP 219
Db 153 AVANLLSLFYIPQISYASSRLLSNKNQYKSFMRPTIPTDEHQATAMADVIEYF 205

RESULT 9
AAU00508
ID AAU00508 standard; protein; 1059 AA.
XX
AC AAU00508;
XX
DT 29-AUG-2001 (first entry)
XX
DE Chicken calcium-sensitive receptor (CaR) protein.
XX
KW Avian; chicken; calcium-sensing receptor; CaR; clone CID;
KW extracellular calcium homeostasis; parathyroid hormone; PTH;
KW serum calcium regulator; bone deposition.
XX
OS Gallus sp.
XX
FH Key Location/Qualifiers
FT Domain 1. .611
FT /label= Extracellular domain
FT /note= "Amino-terminal predominantly hydrophilic domain"
FT 1. .19
FT /label= Signal_peptide
FT Protein 20. .1059

FT Region /label= Mature_CaR_protein
FT 136. .165
FT /note= "Hydrophobic region characteristic of calcium-
FT sensing receptors and metabotropic glutamate receptors"
FT 612. .861
FT /note= "Hydrophobic core comprising helical transmembrane
FT domains"
FT 862. .1059
FT /note= "Carboxy-terminal hydrophilic domain"
XX
PN US6210964-B1.
XX
PD 03-APR-2001.
XX
PF 14-AUG-1998; 98US-00134513.
XX
PR 18-AUG-1997; 97US-0058095P.
XX (BGHM) BRIGHAM & WOMENS HOSPITAL INC.
XX Brown EM, Diaz R, Bai M, Quinn SJ;
XX WPI; 2001-289636/30.
XX N-PSDB; AAS01709.
XX
XX New avian calcium-sensing receptor polynucleotide and encoded receptor
XX protein, useful for regulating serum concentration of calcium animals,
XX particularly in chickens.
XX Claim 1; Fig 2A-2D; 43pp; English.
XX
XX The present sequence representing an avian (chicken) calcium-sensing
XX receptor (CaR) is isolated from chicken parathyroid gland cDNA clone CID.
XX CaR is involved in regulating extracellular calcium homeostasis by
XX controlling PTH (parathyroid hormone) secretion. The polynucleotide
XX encoding CaR is useful for producing calcium-sensing receptor protein,
XX which can be used to regulate extracellular calcium homeostasis and to
XX regulate serum calcium levels in chickens and related species. By
XX increasing serum calcium, more rapid growth is obtained due to an
XX increased rate of bone deposition, and eggs of higher quality are
XX produced. A DNA construct comprising the CaR polynucleotide is useful for
XX developing transgenic animals expressing a mutated form of the calcium-
XX sensing receptor. The CaR polypeptide can be used to produce antibodies
XX to CaR, which can be used to detect the presence of CaR protein using
XX immunoassays. Also described are methods and compositions which can be
XX used to modulate the serum concentration of calcium in humans and animals
SQ Sequence 1059 AA;

Query Match 31.4%; Score 357; DB 4; Length 1059;
Best Local Similarity 37.6%; Pred. No. 1.9e-31;
Matches 79; Conservative 43; Mismatches 64; Indels 24; Gaps 5;
QY 18 LAFLW--AELGSEAKEEKEERTCRLLGKCVDAENHSLVIGLFPIDSRTPANESI-LE 74
Db 11 LLFTWNTAAYGPNQRAQKGD-----IILGLFPFIHFGVAAKQDLKSR 54
QY 75 PASAKCEGFNFQFRWMKAMIHMKIKRDKDILPNITLGYQIFDTCFTISKSVEAVLVF 134
Db 55 PESVECIRYNFRGFRWLQAMIFAIIEINNSPNLLPNMTLGYRIFTCNTVSKALEATLSF 114
QY 135 LTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSVPASRIILGLYLPQVGYTSTCVIL 189
Db 115 VAQNKIDSILNDEFNCSEHIPSTIAVVGATGSGVSTAVANLLGLFYIPQVSYASSRLL 174
QY 190 SDKYQFPSYLRVIAADKIQSKAVVKRIQHP 219
Db 175 SNKNQPKSFLRTIPNDEHQATAMADVIIEYF 204

RESULT 10
ADH10927
ID ADH10927 standard; protein; 850 AA.

XX AC ADH10927;
XX DT 11-MAR-2004 (first entry)
XX DE Atlantic salmon polyvalent cation sensing receptor (PVCr) protein #3.
XX KW polyvalent cation sensing receptor; PVCr; Atlantic salmon;
XX KW growth increase; mortality reduction.
XX OS Salmo salar.
XX PN WO2003087331-A2.
XX PD 23-OCT-2003.
XX PF 09-APR-2003; 2003WO-US011188.
XX PR 11-APR-2002; 2002US-00121441.
XX PR 18-APR-2002; 2002US-00125772.
XX PR 18-APR-2002; 2002US-00125778.
XX PR 18-APR-2002; 2002US-00125792.
XX PA (MARI-) MARICAL INC.
XX PI Harris HW, Nearing J, Betka M;
XX WPI; 2003-845319/78.
XX DR N-PSDB; ADH10926.
XX PT New Atlantic salmon polyvalent cation-sensing receptor, PVCr,
XX PT polypeptides useful in commercial raising of salmon and restoration of
XX PT wild Atlantic salmon populations especially in transfer from freshwater
XX PT to seawater.
XX PS Claim 6; SEQ ID NO 12; 269pp; English.
XX CC The invention comprises the amino acid and coding sequences of polyvalent
XX CC cation sensing receptor (PVCr) proteins from Atlantic salmon. The DNA and
XX CC protein sequences of the invention are useful in the commercial raising
XX CC of Atlantic salmon and the restoration of wild Atlantic salmon
XX CC populations, especially in the transfer from freshwater to seawater with
XX CC increased growth and reduced mortality. The present amino acid sequence
XX CC represents an Atlantic salmon PVCr protein of the invention.
XX SQ Sequence 850 AA;
Query Match 31.1%; Score 354; DB 7; Length 850;
Best Local Similarity 41.6%; Pred. No. 3.1e-31;
Matches 72; Conservative 38; Mismatches 57; Indels 6; Gaps 3;
QY 53 LVIGGLFPIDRTIPANESI-LEPASAKCEGFNFRWWMKAMHMIKEINKRKDILPNI 111
Db 32 ILLGGLFPMHFGVTSKDQDLAARPESTECVRYNFRGRWLQAMIFAEEINNSSTLLPNI 91
QY 112 TLGYQIFDTCFTISKVAVLVLGTQE--ENRPNFRNSTGAPPA--GIVGAGGSFLSV 166
Db 92 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNDEFNCNCTDHPSTIAVVGASGSVST 151
QY 167 PASRILGLYLPQVGYTSTCVILSDKYQFPSPYLRLVIASDKIQSKAVVKRIQHF 219
Db 152 AVANLLGLFYIPQISYASSRLLSNKNQPKSFMRPTIPTDEHQATAMADIIDYF 204
RESULT 11
ADH10923
ID ADH10923 standard; protein; 941 AA.
XX AC ADH10923;
XX DT 11-MAR-2004 (first entry)
XX DE Atlantic salmon polyvalent cation sensing receptor (PVCr) protein #1.

XX KW polyvalent cation sensing receptor; PVCr; Atlantic salmon;
XX KW growth increase; mortality reduction.
XX OS Salmo salar.
XX PN WO2003087331-A2.
XX PD 23-OCT-2003.
XX PF 09-APR-2003; 2003WO-US011188.
XX PR 11-APR-2002; 2002US-00121441.
XX PR 18-APR-2002; 2002US-00125772.
XX PR 18-APR-2002; 2002US-00125778.
XX PR 18-APR-2002; 2002US-00125792.
XX PA (MARI-) MARICAL INC.
XX PI Harris HW, Nearing J, Betka M;
XX WPI; 2003-845319/78.
XX DR N-PSDB; ADH10922.
XX PT New Atlantic salmon polyvalent cation-sensing receptor, PVCr,
XX PT polypeptides useful in commercial raising of salmon and restoration of
XX PT wild Atlantic salmon populations especially in transfer from freshwater
XX PT to seawater.
XX PS Claim 6; SEQ ID NO 8; 269pp; English.
XX CC The invention comprises the amino acid and coding sequences of polyvalent
XX CC cation sensing receptor (PVCr) proteins from Atlantic salmon. The DNA and
XX CC protein sequences of the invention are useful in the commercial raising
XX CC of Atlantic salmon and the restoration of wild Atlantic salmon
XX CC populations, especially in the transfer from freshwater to seawater with
XX CC increased growth and reduced mortality. The present amino acid sequence
XX CC represents an Atlantic salmon PVCr protein of the invention.
XX SQ Sequence 941 AA;
Query Match 31.1%; Score 354; DB 7; Length 941;
Best Local Similarity 41.6%; Pred. No. 3.6e-31;
Matches 72; Conservative 38; Mismatches 57; Indels 6; Gaps 3;
QY 53 LVIGGLFPIDRTIPANESI-LEPASAKCEGFNFRWWMKAMHMIKEINKRKDILPNI 111
Db 32 ILLGGLFPMHFGVTSKDQDLAARPESTECVRYNFRGRWLQAMIFAEEINNSSTLLPNI 91
QY 112 TLGYQIFDTCFTISKVAVLVLGTQE--ENRPNFRNSTGAPPA--GIVGAGGSFLSV 166
Db 92 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNDEFNCNCTDHPSTIAVVGASGSVST 151
QY 167 PASRILGLYLPQVGYTSTCVILSDKYQFPSPYLRLVIASDKIQSKAVVKRIQHF 219
Db 152 AVANLLGLFYIPQISYASSRLLSNKNQPKSFMRPTIPTDEHQATAMADIIDYF 204
RESULT 12
ADH10925
ID ADH10925 standard; protein; 941 AA.
XX AC ADH10925;
XX DT 11-MAR-2004 (first entry)
XX DE Atlantic salmon polyvalent cation sensing receptor (PVCr) protein #2.
XX KW polyvalent cation sensing receptor; PVCr; Atlantic salmon;
XX KW growth increase; mortality reduction.
XX OS Salmo salar.

PN WO2003087331-A2.
XX
PD 23-OCT-2003.
XX
PF 09-APR-2003; 2003WO-US011188.
XX
PR 11-APR-2002; 2002US-00121441.
PR 18-APR-2002; 2002US-00125772.
PR 18-APR-2002; 2002US-00125778.
PR 18-APR-2002; 2002US-00125792.
XX
PA (MARI-) MARICAL INC.
XX
PI Harris HW, Nearing J, Betka M;
XX
DR WPI; 2003-845319/78.
DR N-PSDB; ADH10924.
XX
PT New Atlantic salmon polyvalent cation-sensing receptor, PVCR,
PT polypeptides useful in commercial raising of salmon and restoration of
PT wild Atlantic salmon populations especially in transfer from freshwater
PT to seawater.
XX
PS Claim 6; SEQ ID NO 10; 269pp; English.
XX
CC The invention comprises the amino acid and coding sequences of polyvalent
CC cation sensing receptor (PVCR) proteins from Atlantic salmon. The DNA and
CC protein sequences of the invention are useful in the commercial raising
CC of Atlantic salmon and the restoration of wild Atlantic salmon
CC populations, especially in the transfer from freshwater to seawater with
CC increased growth and reduced mortality. The present amino acid sequence
CC represents an Atlantic salmon PVCR protein of the invention.
XX
SQ Sequence 941 AA;
Query Match 31.1%; Score 354; DB 7; Length 941;
Best Local Similarity 41.6%; Pred. No. 3.6e-31;
Matches 72; Conservative 38; Mismatches 57; Indels 6; Gaps 3;
QY 53 LVIGGLFPIDSRITIPANESI-LEPASAKCEGFNFQFRWMKAMIHMIKIKRDKILPNI 111
Db 32 ILGLGLFPMHFGVTSKDQDLAARPESTECVRYNFRGRWLQAMIFAIEINNSSTLLPNI 91
QY 112 TLGYQIFDTCFTTISKSVAVLVLFTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
Db 92 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNDEFNCNCTDHIPTSTIAVVGASGSAVST 151
QY 167 PASRILGLYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
Db 152 AVANLLGLFYIPQISYASSRLLSNKNQFKSFMRTIPTDEHQATAMADIIDYF 204
RESULT 13
ADH10929
ID ADH10929 standard; protein; 941 AA.
XX
AC ADH10929;
XX
DT 11-MAR-2004 (first entry)
XX
DE Atlantic salmon polyvalent cation sensing receptor (PVCR) protein #4.
XX
KW polyvalent cation sensing receptor; PVCR; Atlantic salmon;
KW Growth increase; mortality reduction.
XX
OS Salmo salar.
XX
PN WO2003087331-A2.
XX
PD 23-OCT-2003.
XX
PF 09-APR-2003; 2003WO-US011188.
XX

PR 11-APR-2002; 2002US-00121441.
PR 18-APR-2002; 2002US-00125772.
PR 18-APR-2002; 2002US-00125778.
PR 18-APR-2002; 2002US-00125792.
XX
PA (MARI-) MARICAL INC.
XX
PI Harris HW, Nearing J, Betka M;
XX
DR WPI; 2003-845319/78.
DR N-PSDB; ADH10928.
XX
PT New Atlantic salmon polyvalent cation-sensing receptor, PVCR,
PT polypeptides useful in commercial raising of salmon and restoration of
PT wild Atlantic salmon populations especially in transfer from freshwater
PT to seawater.
XX
PS Claim 6; SEQ ID NO 14; 269pp; English.
XX
CC The invention comprises the amino acid and coding sequences of polyvalent
CC cation sensing receptor (PVCR) proteins from Atlantic salmon. The DNA and
CC protein sequences of the invention are useful in the commercial raising
CC of Atlantic salmon and the restoration of wild Atlantic salmon
CC populations, especially in the transfer from freshwater to seawater with
CC increased growth and reduced mortality. The present amino acid sequence
CC represents an Atlantic salmon PVCR protein of the invention.
XX
SQ Sequence 941 AA;
Query Match 31.1%; Score 354; DB 7; Length 941;
Best Local Similarity 41.6%; Pred. No. 3.6e-31;
Matches 72; Conservative 38; Mismatches 57; Indels 6; Gaps 3;
QY 53 LVIGGLFPIDSRITIPANESI-LEPASAKCEGFNFQFRWMKAMIHMIKIKRDKILPNI 111
Db 32 ILGLGLFPMHFGVTSKDQDLAARPESTECVRYNFRGRWLQAMIFAIEINNSSTLLPNI 91
QY 112 TLGYQIFDTCFTTISKSVAVLVLFTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
Db 92 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNDEFNCNCTDHIPTSTIAVVGASGSAVST 151
QY 167 PASRILGLYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
Db 152 AVANLLGLFYIPQISYASSRLLSNKNQFKSFMRTIPTDEHQATAMADIIDYF 204
RESULT 14
AAV49105
ID AAV49105 standard; protein; 612 AA.
XX
AC AAV49105;
XX
DT 07-JAN-2000 (first entry)
XX
DE Human CaR extracellular domain.
XX
KW G-protein fusion receptor; CaR; calcium receptor; GluR; head injury;
KW metabotropic glutamate receptor; GABABR; chimeric receptor; stroke;
KW gamma-aminobutyric acid receptor; allosteric modulator; antagonist;
KW spinal cord injury; epilepsy; ischaemia; hypoglycaemia; anoxia;
KW Alzheimer's disease; hyperparathyroidism; osteoporosis; depression;
KW cognitive disorder.
XX
OS Homo sapiens.
XX
PN WO9951641-A1.
XX
PD 14-OCT-1999.
XX
PF 02-APR-1999; 99WO-US007333.
XX
PR 03-APR-1998; 98US-0080671P.
XX

PA (NPSP-) NPS PHARM INC.
XX Stormann TM, Hammerland LG, Storjohann LL, Busby JG, Garrett JE;
PI Simin RT;
XX
DR WPI; 1999-610995/52.
DR N-PSDB; AAZ31049.
XX
PT New G-protein fusion receptors and chimeras containing domains from
PT different receptors, used to screen for modulators, potentially useful
PT e.g. for treating or preventing stroke or Alzheimer's disease.
XX
PS Claim 13; Fig 1; 255pp; English.
XX
CC The invention relates to G-protein fusion receptors (I) comprising: (1)
CC in the N to C direction, extracellular (ECD), transmembrane (TMD) and
CC intracellular (ICD) domains, each chosen independently from a CaR
CC (calcium receptor), GluR (metabotropic glutamate receptor) and GABABR
CC (gamma-aminobutyric acid receptor); (2) an optional linker attached to
CC the C-terminus of ICD; and (3) a G-protein (GP) linked to ICD or the
CC linker. (I), and recombinant chimeric receptors (CR) without the GP
CC component, are used to assess function of the various domains and to
CC identify compounds (e.g. allosteric modulators or antagonists) that act
CC on these domains. The modulators are potentially useful for treating or
CC preventing diseases associated with the receptors, e.g. stroke, head or
CC spinal cord injury, epilepsy, ischaemia, hypoglycaemia, anoxia,
CC Alzheimer's disease, hyperparathyroidism, osteoporosis, cognitive
CC disorders and depression. Nucleic acid (II) that encodes (I) is used: (1)
CC for recombinant production of corresponding proteins; and (2) to produce
CC cells used in screening for modulators. Use of CaR and mGluR domains
CC allows presentation of GABABR domains, to a binding agent, in a form more
CC like the natural domain structure compared with use of incomplete
CC receptors, lacking one or more domains. By shuffling different domains,
CC agents can be identified that affect particular domains of a receptor
XX
SQ Sequence 612 AA;

Query Match 31.0%; Score 353; DB 2; Length 612;
Best Local Similarity 37.1%; Pred. No. 2.5e-31;
Matches 78; Conservative 44; Mismatches 64; Indels 24; Gaps 5;

QY 18 LAFLW--AELGSEAKEEKEERTCRLLGKCVDAENHSLVIGGLFPIDSRTPANESI-LE 74
Db 11 LALTWHTSAYGPDQRAQKKG-----IILGGLFPIHFGVAAKDQDLKSR 54
QY 75 PASAKCEGFNFRFMKAMHMIKEINKRKDILPNITLGYQIFDTCFTTISKSVAVLVF 134
Db 55 PESVECI RYNGFRGFWLQAMIFAEEINSSPALLPNLTGLYRIFDTCNTVSKALEATLSF 114
QY 135 LTQGE---ENRPNFRNSTGAFPA--GIVGAGGSFLSVPASRIGLYLPQVGYTSTCVIL 189
Db 115 VAQNKIDSLNDEFNCSEHIPSTIAVVGATSGVSTAVANLLGLFYIPQVSYASSRLL 174
QY 190 SDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
Db 175 SNKNQFKSFLRTIPNDEHQATAMADIIEYF 204

RESULT 15
AAO15072
XX AAO15072 standard; protein; 612 AA.
AC AAO15072;
XX
DT 22-AUG-2002 (first entry)
XX Human CaR extracellular domain.
DE
XX Human; G-protein fusion receptor; extracellular domain;
KW transmembrane domain; intracellular domain; CaR; mGluR; GABABR;
KW modulator identification.
XX
OS Homo sapiens.

XX WO200229033-A2.
PN
XX
PD 11-APR-2002.
XX
PF 03-OCT-2001; 2001WO-US031074.
XX
PR 03-OCT-2000; 2000US-00679664.
XX
PA (NPSP-) NPS PHARM INC.
XX
PI Stormann T, Hammerland LG, Storjohann LL, Busby JG, Garrett JE;
PI Simin RT;
XX
DR WPI; 2002-330170/36.
XX
PT Novel G-protein fusion receptor, useful for identifying modulators of
PT CaR, mGluR and GABABR, comprises G-protein joined to the intracellular
PT domain of the receptor.
XX
PS Claim 18; Fig 1; 168pp; English.
XX
CC The invention comprises G-protein fusion receptors - comprising
CC extracellular, transmembrane and intracellular domains similar to CaR,
CC mGluR or GABAB receptor sequences. The G-protein fusion receptors of the
CC invention may also possess a linker joined to the carboxy terminus of the
CC intracellular domain, and a G-protein joined to the linker. The G-protein
CC fusion receptors of the invention are useful for identifying modulators
CC of CaR, mGluR and GABABR for use in treating associated conditions. The
CC present amino acid sequence was used in the production of the invention
XX
SQ Sequence 612 AA;

Query Match 31.0%; Score 353; DB 5; Length 612;
Best Local Similarity 37.1%; Pred. No. 2.5e-31;
Matches 78; Conservative 44; Mismatches 64; Indels 24; Gaps 5;

QY 18 LAFLW--AELGSEAKEEKEERTCRLLGKCVDAENHSLVIGGLFPIDSRTPANESI-LE 74
Db 11 LALTWHTSAYGPDQRAQKKG-----IILGGLFPIHFGVAAKDQDLKSR 54
QY 75 PASAKCEGFNFRFMKAMHMIKEINKRKDILPNITLGYQIFDTCFTTISKSVAVLVF 134
Db 55 PESVECI RYNGFRGFWLQAMIFAEEINSSPALLPNLTGLYRIFDTCNTVSKALEATLSF 114
QY 135 LTQGE---ENRPNFRNSTGAFPA--GIVGAGGSFLSVPASRIGLYLPQVGYTSTCVIL 189
Db 115 VAQNKIDSLNDEFNCSEHIPSTIAVVGATSGVSTAVANLLGLFYIPQVSYASSRLL 174
QY 190 SDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
Db 175 SNKNQFKSFLRTIPNDEHQATAMADIIEYF 204

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